

ATTACHMENT 1

**WASTE CHARACTERISTICS AND
WASTE ANALYSIS PLAN (WAP)**

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Attachment 1

WASTE CHARACTERISTICS AND WASTE ANALYSIS PLAN (WAP)

Attachment 1 describes the chemical and physical properties of the hazardous wastes stored at the facility, and the WAP, which is used to ensure that sufficient information is available for the proper handling and storage of the wastes.

1.0 CHEMICAL AND PHYSICAL ANALYSES **[40 CFR 270.14(b) (2), 264.13(a); UAC R315-8-2.4]**

The hazardous wastes that are stored at this facility are summarized in Table 1. This facility stores hazardous waste that is generated both on-site and off-site. The off-site generated wastes are from Ashland customers. Off-site wastes stored at this facility have been pre-qualified for acceptance by a third party (non-Ashland), permitted treatment, storage, or disposal facility (TSDF), or reclamation firm. Each off-site generated waste stream is profiled or characterized for its specific chemical and physical properties, by the generator and the permitted TSDF or reclamation facility.

1.1 On-Site Generated Wastes

On-site, or plant generated waste, includes mixed solvents (line flush) from the loading/unloading and drumming operations for organic solvents. In addition, the plant generates waste consisting of off-specification products (not spent) returned to the plant by the customer, which cannot be beneficially reused or reclaimed. The majority of the products returned by the customer are resold; however, some off-specification solvents are hazardous waste and are sent to a permitted TSDF or reclamation facility. Other wastes generated by Ashland include off-specification polyester resin and rags/absorbents used to clean spills or drips of organic solvent.

1.2 Off-Site Generated Wastes

Off-site, or customer generated wastes, consist of the following: spent organic solvents, inorganic corrosives, plating wastes, copper cyanide waste, acutely hazardous waste (i.e., copper cyanide), F and K listed wastes, off-specification and discarded commercial chemical products, and toxicity listed and characteristic wastes. Hazardous wastes that have been pre-qualified for acceptance are picked up from the generator and transported to Ashland's facility where they may be stored until a truckload or partial truckload quantity is accumulated for shipment to the designated permitted disposal or recycling facility. Hazardous wastes are transported and stored in containers that meet the requirements of the U.S. Department of Transportation (DOT). Storage of containerized hazardous waste at the facility is limited by the facility's permit to a maximum of 32,560 gallons, which is equivalent to 592, 55-gallon drums.

The three principal waste categories from a segregation/incompatibility standpoint are as follows.

- Organic chemicals and solvents, including, ignitable wastes and halogenated wastes.
- Cyanide wastes and cyanide containing wastes from metal operations.
- Corrosive wastes, including caustic wastes with pH equal to or greater than 12.5, and acid wastes with pH equal to or less than 2.0.

Waste solvents and waste products containing spent solvents represent a large volume of the wastes handled at the facility. These wastes include solvent based paints and coatings, thinners, cleaning and degreasing solvents, laboratory solvents, paint residues, printing inks, and still bottoms. These wastes are hazardous primarily due to ignitability and toxicity, or because the wastes exhibit a characteristic of toxicity, or due to the presence of listed wastes from specific or non-specific sources.

Inorganic corrosives are also managed in large volume of off-site wastes. These include spent paint strippers, spent cleaning solutions, and other wastes that exhibit the characteristics of corrosivity.

Spent wastes from customers who use plating, metal treating, and mineral metals recovery chemicals represent a small volume of off-site wastes. Off-specification commercial chemical products also represent a small volume of off-site wastes.

Plating wastes from non-specific plating, stripping, cleaning, and quenching operations, and which contain cyanides, are incompatible with acid corrosive wastes. Any wastes containing cyanide are segregated from acid corrosive wastes.

The waste types will include commercial chemical products and wastes from specific sources, such as wood preservation; inorganic pigments; organic chemicals; inorganic chemicals; pesticides; petroleum refining; iron and steel manufacturing; primary aluminum manufacturing; secondary lead manufacturing; veterinary pharmaceuticals; ink formulations; and coking.

Containers of potentially incompatible wastes will be segregated in the waste container storage unit (CSU) in accordance with the recommendations as listed in 40 Code of Federal Regulations (CFR) 264, Appendix V. Furthermore, all containers are stored on pallets or container legs. Incompatible wastes are placed in the storage areas in accordance with the hazardous waste compatibility guidance included as Appendix A. Containers of waste are not opened while in storage at the facility. No co-mingling, mixing, bulking, or treatment takes place at the facility.

Before Ashland's approval of a customer's hazardous waste, a comprehensive, four-step waste analysis system is used to identify and characterize each waste stream, determine

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if Ashland can accept the waste for storage, obtain approval for disposal or recycling, and ensure that the waste will be properly managed.

Step 1

The first step in the system involves obtaining specific chemical and physical data for each waste stream. Each customer is required to provide this data in the form of a Waste Profile Sheet (WPS) for each waste stream (Appendix B). In addition to the WPS, and as requested, the customer provides a representative sample in accordance with UAC R315-2, material specification sheet, material safety data sheet (MSDS), etc., representing the profiled waste stream and its components.

The customer provides known data relative to the physical, chemical, and Resource Conservation and Recovery Act (RCRA) hazardous characteristics of the waste on the WPS. The waste is identified by name, process generating the waste, and RCRA hazardous waste code(s).

Step 2

The second step involves verification of the generator's data and determination of the best available method for disposal or reclamation. Ashland reviews the information and/or analysis provided by the customer regarding the waste stream. This review is to ensure that all applicable hazardous waste codes have been identified and that no hazardous waste codes are identified that cannot be stored at the Clearfield facility in accordance with the permit. However, because Ashland also operates as a transfer facility, these wastes may be held on-site for up to 10 days. The criteria used to conduct this review are provided in Table 2. This review is also to confirm the generator's information identifying the appropriate treatment methods or treatment levels for all land disposal restricted (LDR) wastes.

Some of the TSDFs used by Ashland for disposal or reclamation of customers' wastes sample the waste streams submitted for disposal to determine the best available method for disposal or reclamation. This sample may be taken prior to approval of the waste for disposal or when the waste shipment arrives at the TSDF facility. The TSDF laboratory analyzes the physical and chemical composition of the waste to both confirm the profile information provided by the generator and to determine the most efficient and effective method for the disposal or reclamation of the waste material. In general, Ashland does not receive a copy of the TSDF analytical data.

Step 3

The third step is an acknowledgment by the waste management firm of the disposition of the waste. If they agree to accept the waste, an agreement is reached between Ashland and the TSDF, which identifies, among other things, the approved waste stream by reference to the specific WPS, specifies the method of disposal or reclamation, and location of the TSDF to which the waste is to be sent.

Step 4

The fourth step of the waste approval process is the signing of a contract between Ashland and the generator. This contract identifies, by WPS, the specific waste stream, which Ashland agrees to transport to the disposal or reclamation facility and specifies the location of the Ashland storage facility. Moreover, the contract specifies that if the waste is found to be non-conforming upon delivery to the waste management facility, the generator shall be liable for all reasonable expenses and charges that may be incurred. A waste is non-conforming if it does not match the description on the WPS or if it has constituents not identified in the WPS, which might increase the nature of the hazard or for which the disposal facility is not designed or permitted to manage.

The customer's waste streams are re-certified at least whenever the waste changes significantly or the process generating the waste has changed. At a minimum, re-certification will meet the requirements of the receiving TSDF's waste analysis plan.

These are the steps that must be completed before an off-site generated waste can be accepted for storage at this facility. All of the documents referenced in the above discussion are kept permanently on file at the Ashland Clearfield facility for each off-site generated waste stream that is accepted and stored. This includes the initial analysis and re-certification of each waste stream as required by the receiving TSDF's WAP. As such, they become a permanent part of the Ashland facility Operating Record.

1.2.1 Containerized Waste **[40 CFR 270.15(b)(1), 264.172]**

Containers for wastes must be made of or lined with materials that will not react with, and are otherwise compatible with, the waste to be stored. Containers to be stored include portable containers that meet DOT requirements for the hazardous material in the container. The container types that may be received at the facility and their materials of construction are identified in Attachment 10. Compatibility of container construction material and wastes to be stored in the container are verified prior to storage by comparing information collected during waste characterization with manufacturer's specifications and container usage data. Generators are

responsible for proper packaging of wastes prior to transportation to the Ashland Clearfield facility. Ashland will not accept for transport any wastes not packaged in a chemically compatible container in good condition. Waste containers are always kept closed during storage. Containers are not opened, handled, or stored in a manner that may cause them to rupture or leak. If a container holding waste is not in good condition, or if it begins to leak, it will be placed in an approved overpack drum.

Incompatible wastes are not placed in the same container. Ashland employees are trained to adhere to the hazardous waste compatibility guidance included in Appendix A when placing wastes within a specific storage area. Wastes that may be stored at the facility are listed in Table 1. These hazardous wastes may contain free liquids; therefore, the permitted storage areas are designed for containers with free liquids.

The hazardous waste labels on the containers identify ignitable (D001), corrosive (D002), and potentially reactive (cyanide-containing) wastes. Facility personnel are instructed to keep acids and caustics stored separately and to keep all cyanide-containing wastes separate from the corrosives. Also, as a general rule, inorganic corrosive wastes are kept separate from the waste solvents.

Waste containers are adequately spaced for inspection and for access by personnel. Containers are stored with labels visible for inspection.

1.2.2 Waste in Tank Systems

[40 CFR 270.16(a), 264.190(a), 264.191(b)(2), 264.192(a)(2)]

No hazardous waste is stored in tanks at this facility.

1.2.3 Waste in Piles

[40 CFR 270.18(a), 264.250(c)(1) and (4)]

There are no waste piles at this facility.

1.2.4 Landfilled Wastes

[40 CFR 270.21(a), 264.13(c)(3), 264.314]

No waste is landfilled at this facility.

1.2.5 Wastes Incinerated and Wastes Used in Performance Tests
[40 CFR 270.19(c), 270.62(b), 264.341]

No waste is incinerated at this facility. No performance testing is conducted.

1.2.6 Wastes to be Land Treated
[40 CFR 270.20(b)(4), 264.271(a)(1) and (2), 264.272, 264.276, 261 - Appendix VIII]

There are no land treatment units at this facility.

1.2.7 Wastes in Miscellaneous Treatment Units
[40 CFR 270.23(d)]

There are no miscellaneous treatment units at this facility.

1.2.8 Wastes in Boilers and Industrial Furnaces
[40 CFR 270.66(c), 266.102(b)]

No waste is burned at this facility.

1.2.9 Wastes on Drip Pads
[40 CFR 270.26, 264.570]

There are no drip pads at this facility.

2.0 WASTE ANALYSIS PLAN
[40 CFR 270.14(b)(3), 264.13(b), (c); UAC R315-8-2.4 and 5.4]

This WAP, which is used to assure that sufficient information is available for the proper handling and storage of hazardous wastes, is described below.

Ashland has a program to assist customers with the disposal or reclamation of their chemical waste. The waste-handling program was developed by Ashland to ensure proper container management and involves joint agreements between Ashland and various permitted TSDFs. Ashland assists with pick-up and transportation of customer containerized wastes for disposal or reclamation at a permitted TSDF.

Ashland assists its customers in qualifying their hazardous waste streams for approval and acceptance at a select commercial waste management or reclamation facility. Ashland subsequently picks up and transports the customers' containerized wastes to the identified waste management facility. Containerized customer wastes are stored temporarily at the Ashland facility until such time as a truck load quantity is accumulated and can effectively and efficiently be transported to the receiving TSDF.

This WAP for the Ashland Clearfield facility addresses three primary areas in detail:

- Pre-acceptance Procedure
- Pre-shipment Inspection
- Incoming Waste Inspection

Pre-acceptance Procedure

The principal objectives of the pre-acceptance procedures are to characterize the waste, qualify it for acceptance, and to prepare a contractual agreement with the customer, Ashland, and the waste management facility.

The customer is required to provide detailed information about each waste stream on a WPS. The WPS identifies the stream as a wastewater or non-wastewater for treatability group purposes. The customer is required to complete a WPS for each waste stream generated.

The customer, upon request, is required to provide a representative sample of the waste. It is the customer's responsibility to ensure that the sample collected and submitted for disposal or reclamation is representative of the waste in accordance with UAC R315-2 to be shipped to the receiving TSDF. A WPS, which includes a generator's certification (Appendix B), and sample will be forwarded to the receiving TSDF. Mixed solvents and off-specification products may not be sampled because the material is similar in content to the original, on-specification material, but is merely inadequate quality for sale or commercial use.

The customer is required to notify the TSDF of the applicability of the LDRs at 40 CFR 268. The permitted TSDF will not accept the waste stream unless the TSDF has received, with the initial shipment of the waste, a one-time written notice from the generator in accordance with 40 CFR 268.7.

The waste management firm confirms the information provided on the WPS by the generator. The waste management firm's laboratory may perform selected additional analysis as may be necessary to confirm the appropriateness and cost of the specified method of disposal. If the waste stream is characteristic of the WPS and the waste management firm accepts the waste for disposal or reclamation, an agreement is reached between Ashland and the waste management facility, which identifies the approved waste stream by reference to the specific WPS, specifies the method of disposal or reclamation and the location of the disposal facility to which the waste is to be sent.

After approval by the permitted TSDF, a Waste Transportation Agreement (WTA) is signed between Ashland and the customer. The customer is informed that RCRA regulations require a re-analysis whenever a waste is reasoned to be different than previously offered. The customer is also informed that they are liable for costs, transportation, handling, and analysis if, upon arrival at the TSDF, the waste is not as listed on the manifest and container labels. This procedure is applicable to each waste stream that a customer offers.

Pre-shipment Inspection

Prior to scheduling a pick-up of customer waste, the customer file is checked to verify that the waste stream has been qualified for acceptance. At this time, it is also verified if any waste streams are covered by LDRs, and if the appropriate one-time notification has been submitted to the TSDF. The customer is required to complete forms that identify the wastes as restricted and confirm if the waste has been or must be treated to comply with applicable performance standards. At the time of pick-up from the customer's facility, the driver will inspect and verify that the lot of waste is properly labeled and containers are all intact, and that the required forms are included.

Incoming Waste Inspection

An Ashland representative will inspect all incoming shipments of waste. The representative will utilize the manifest accompanying the shipment to verify the following points:

- The drums are counted to verify the number shown on the manifest.
- The drums are inspected to ensure that they are physically sound, tightly closed, and are not bulging or showing evidence of any recent physical damage.
- The drum labels are checked against the waste manifest. The manifest is checked for the generator's signature and the proper DOT shipping data.
- The Ashland representative will confirm that one-time land disposal notification forms have been completed for the initial shipment of wastes.

Any significant discrepancy between the shipment, the manifest, or the WPS will be noted in writing on the manifest. Ashland will immediately contact the customer representative listed on the WPS. If a significant discrepancy cannot be reconciled with the customer within fifteen (15) calendar days, the Utah Department of Environmental Quality (DEQ) will be notified of our attempt to resolve the matter and will be forwarded a copy of the manifest, along with an explanation of the manifest discrepancy. In this instance, the waste shipment would be returned to the customer.

An Ashland representative will note the reactive properties of each lot of wastes as a basis for segregating the wastes. Plant personnel are trained to keep acids and caustics separate from each other and to keep cyanide wastes separate from corrosives. Wastes are further segregated in the storage areas in accordance with the hazardous waste compatibility guidance included in Appendix A.

2.1 Parameters and Rationale **[40 CFR 270.14(b)(3), 264.13(b)(1)]**

The most extensive analytical evaluations of wastes are conducted by the TSDF's laboratory. The qualifying of confirmatory testing is done primarily for five reasons:

- To confirm the accuracy of the information provided on the WPS
- To confirm the accuracy of the declared RCRA hazardous waste code (WPS)
- To establish the most effective waste management alternative
- To establish the safest container/shipment handling methods
- To establish potential land disposal restrictions for the waste

A list of parameters chosen for analysis and an explanation of the rationale for their selection are given in Table 3.

2.2 Test Methods **[40 CFR 270.14(b)(3), 264.13(b)(2)]**

The analytical methods employed to test for the parameters listed in this plan are provided in Table 3.

2.3 Sampling Methods **[40 CFR 270.14(b)(3), 264.13(b)(3)]**

For customer generated wastes, the sampling method used to obtain a representative sample is specified by the generator. The customer certifies that the sample offered is representative of the waste generated. From a sample collection standpoint the waste types are described as free flowing liquids, sludges, and solids. For free flowing liquids, representative samples are collected by using a Coliwasa (or equivalent) sampler, or dip tube. Representative samples of sludges and solids are collected by using a trier, scoop, hand auger, or equivalent.

Ashland provides assistance if asked by a customer about required sampling methods. The generator is directed to SW-846, which contains the sampling methods required by the U.S. Environmental Protection Agency (EPA), including the appropriate sample preservatives and preservation procedures.

2.4 Frequency of Analyses **[40 CFR 270.14(b)(3), 264.13(b)(4)]**

Plant Generated Waste

If a plant generated material is determined to be a regulated hazardous waste, Ashland applies knowledge of the hazard characteristics of the waste based on the materials and the processes used, each time a waste is generated. When necessary, a Delart Drum Thief of polyethylene material is used to collect samples from drummed wastes

generated by Ashland. The sampler is 41 inches long with 3/16-inch openings at each end.

Customer Generated Waste

Pre-Acceptance and Re-certification Analyses

The TSDF may require sampling and analysis of the waste stream prior to acceptance of the waste. The generator will be responsible for sampling and analyzing each waste stream. In other cases, the waste shipment is sampled upon arrival at the TSDF. In general, Ashland does not receive a copy of the TSDF waste screening test data.

Each waste stream will be re-certified at least whenever the waste changes significantly or the process generating the waste has changed. The customer is required to notify Ashland of any change in either the process or raw materials.

The intent of this WAP is to verify (or correct) information provided on the WPS or equivalent analytical report.

Disposal or Reclamation Facility Acceptance

The ultimate receiving TSDF or reclamation facility will abide by its approved waste analysis plan for acceptance of wastes. In general, TSDF personnel identify containers for sampling, numbering no less than 10-percent of the aggregate shipment. The collected samples are immediately analyzed for comparison to the waste characteristics provided on the WPS and their own laboratory generated qualification analyses. The tests performed at the time of delivery to the TSDF or reclamation facility may include:

- Visual inspection
- Color
- Physical state (solid, liquid, sludge)
- Viscosity
- Layers (single, multi)
- pH
- Water mix (qualitative test for reactivity)
- Flash point

The results of these screening procedures confirm the identification of received wastes.

2.5 Additional Requirements for Wastes Generated Off-Site **[40 CFR 270.14(b)(3), 264.13(b)(5) and (c), 264.73(b)]**

Each waste shipment is inspected as it is received at the Ashland facility as described in the *Pre-Acceptance Procedures* above. The hazardous waste manifest is checked for the generator's signature, the DOT shipping data, the identification of the waste, and the total quantity of the shipment. The containers are counted to verify the quantity on the manifest. The waste labels are checked to ensure that they are completely and correctly filled out and that they refer to the correct manifest.

If there is a discrepancy between the waste shipment and the accompanying hazardous waste manifest, it is noted in writing on the waste manifest. If the discrepancy cannot be reconciled with the customer within 15 days, the Utah DEQ will be notified of Ashland's attempt to resolve the matter, and will be sent a copy of the manifest along with an explanation of the manifest discrepancy.

A RCRA Operating Log is maintained to track each waste shipment received at the facility. The description and quantity of each hazardous waste received are recorded. Each customer manifest number is recorded on the log. A copy of the log is included in Appendix C. Waste analysis and other re-certification documentation are kept in a customer file on-site.

The wastes accepted at the Ashland Clearfield facility do not contain the following:

- Hydrophoric Materials
- Pyrophoric Materials
- Class A Explosives
- Shock Sensitive Materials
- Radioactive or nuclear waste material
- Compressed gas cylinders or aerosol cans which do not meet the definition of an empty container
- Dioxin-containing waste (F020, F021, F022, F023, F026, F027, and F028)
- D003 Reactive waste

Ashland will not perform routine sampling and analysis of secured waste containers upon arrival at the Clearfield facility. Sampling and analysis of containers of waste temporarily stored at the Clearfield facility is not necessary to meet the requirements of 40 CFR 264.13(c) for the following reasons:

- Extensive information regarding the nature of the waste is obtained at the time the waste profile is developed.
- Additional information regarding the waste characteristics is determined during the waste acceptance process performed by the receiving recycling, treatment or disposal facility. This step of the process frequently includes representative waste sampling and analysis in

accordance with the requirements of the receiving facility's waste analysis plan.

- No waste leaves a generator's facility to be shipped to the Clearfield facility until it has been approved for acceptance by a designated recycling, treatment or disposal facility; written agreements are in place between the generator, Ashland, and the receiving facility.
- Waste shipments are inspected before they are transported from the generator's facility to ensure that the information provided on the container markings and DOT label, as well as the container type and number, match the manifest, Ashland's waste profile, and sales order for that shipment. Discrepancies are resolved before the shipment leaves the generator's facility.
- Waste shipments are inspected upon arrival at the Clearfield facility to again verify that the shipment information indicated by container markings and labeling, as well as the number and type of containers on the shipment, match the waste manifest, Ashland's waste profile, and sales order. Discrepancies are resolved with the generator before the waste is placed into storage. If a discrepancy cannot be resolved at this point, the shipment is rejected and is returned to the generator.
- A further description of the waste acceptance screening procedure is included in this WAP.
- En-route shipments of hazardous waste received and stored in the Clearfield facility are maintained in the same secured containers as they were received in. The containers are not opened, nor is any commingling, mixing, or adding of waste in containers performed while on-site. The secured containers of waste are segregated among the two permitted storage areas based on the known hazards of the waste as indicated by Ashland's waste profile information, and further identified by the compatibility guidance, which is included in Appendix A. Further segregation is provided for certain incompatible materials by placing these containers on pallets or self-containing legs in the storage areas. Waste stored in the outdoor storage area is further divided into six separate bays. This assures that no adverse reaction occurs in the unlikely event that a waste container leaks while in storage.
- Ashland personnel conduct documented inspections of all containers in storage on a daily basis. Informal checks of the warehouse storage areas are performed much more frequently, assuring that potential leaks or other problems are detected before they can become serious incidents.

- Waste containers in storage at the Clearfield facility are forwarded to their designated receiving facility for recycling, treatment, or disposal at the earliest practical time as transportation logistics and business considerations allow.
- Waste shipments in storage at the Clearfield facility are re-manifested and shipped to their designated receiving facility in the same secured containers that they were received in from the generator. No transfer of wastes to different containers occurs. The only exception would be the transfer of waste from a marginal or leaking container to an overpack drum or other suitable container to prevent a spill. No hazardous wastes are commingled, blended, repackaged or bulked.
- Upon arrival at the designated receiving facility from the Clearfield facility, waste shipments are inspected and, if necessary, sampled and analyzed in accordance with the receiving facility's WAP. In the highly unlikely event that a discrepancy should be determined at this point, the discrepancy will be resolved with the generator. Ashland does not typically receive the results of TSDF screening test data.

In summary, the Clearfield facility only stores en-route shipments of secured containers for a short time between the generator and receiving facility. These shipments are segregated via curbed storage areas and/or containment to minimize the potential adverse impact of a leaking container, and are frequently inspected while at the Clearfield facility. No commingling, blending, repackaging, transfer or other hazardous waste management activities occur. Therefore, all information which is required to safely store and properly manage these wastes while on-site is provided by the profile information and analytical data obtained during the pre-acceptance and approval process.

2.6 Additional Requirements for Ignitable, Reactive, or Incompatible Wastes **[40 CFR 270.14(b)(3), 264.13(b)(6), 264.17; UAC R315-8-2.8]**

Ashland takes precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste is separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. Smoking is not permitted in the areas and "No Smoking" signs are conspicuously posted. The ignitable waste storage areas satisfy RCRA requirements for storage of flammable and combustible liquids.

Containers of hazardous wastes that are incompatible with each other are segregated in accordance with the hazardous waste compatibility guidance included in Appendix

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A. The waste containers stored in the container storage unit (CSU) are further separated by either a 2 or 4-inch high curb and adequate aisle space. The basis for segregating the wastes is the known properties of the waste and the process from which they come. This is supplemented by the data that is supplied by the generator on the WPS. This is confirmed by the pre-acceptance analysis that is conducted on the waste samples by the generator.

No mixing of off-site generated hazardous wastes from different generators or different waste streams, or opening of off-site generated waste containers is done by this facility. Incompatible on-site generated wastes are not mixed or placed in the same container.

2.7 Additional Requirements Pertaining to Boiler and Industrial Furnace Facilities
[40 CFR 270.22, 266.102(e)(6)(ii)(C), 266.102(e)(6)(iii)]

Not applicable to this facility.

2.8 Additional Requirements Pertaining to Containment Buildings
[40 CFR 270.14(b)(3), 264.1100]

Not applicable to this facility.

2.9 Managing Waste Profiles Electronically
[UCA 46-4]

The Ashland Clearfield facility manages all waste profiles electronically in accordance with the Uniform Electronic Transactions Act (UCA 46-4). Ashland will create and maintain reliable and accurate electronic records with a system that supports electronic records management. Electronic records are simply records in electronic format rather than having been printed or written onto paper. The waste profiles are managed in accordance with the Clearfield facility's recordkeeping policy and procedure. The electronic profiles will be accessible by the plant manager, supervisor, and inventory control coordinator. Backup access will be provided by customer service representatives at the facility. In addition, 24 hour access to the electronic profiles will be provided by Ashland's emergency response center at 1-800-ASHLAND.

Each customer is required to provide data in the form of a WPS for each waste stream. This WPS for each waste stream is maintained electronically until it is re-certified or any other changes are necessary. At that time, the outdated WPS is deleted and the new WPS is maintained until further revision is necessary. The WPSs will include the generator's certification in the form of an electronic signature, which will satisfy the Act. The Clearfield facility is responsible for ensuring that WPSs are maintained onsite. The WPS will be saved in a customer file on the hard drive with shared access. Each WPS will be a "read only" file.

An electronic recordkeeping system will be maintained so that it is adequate to collect, organize, and categorize records, and facilitate the preservation, retrieval, use, and disposition of records. Ashland will train all parties that may gain access to the files in maintaining the electronic filing system before the system is fully implemented and before August 8, 2007.

3.0 WASTE ANALYSIS REQUIREMENTS PERTAINING TO LAND DISPOSAL RESTRICTIONS **[40 CFR 270.14(b)(3), 264.13, 264.73; UAC R315-8-2.4]**

Waste that is restricted from land disposal will not be accepted for storage, unless the initial shipment of the waste is accompanied by the proper LDR notification form.

3.1 Waste Analysis **[40 CFR 270.14(a), 264.13(a)(1), 268.1, 268.7, 268.9, 268.32 through 268.37, 268.41 through 268.43]**

The hazardous wastes stored at this facility are listed in Table 1. The facility stores wastes that are generated off-site by Ashland customers and have been pre-qualified for acceptance by a permitted TSDF. Each waste stream is profiled or characterized for its specific chemical or physical properties. This information is provided by the generator and includes the treatability group, and if applicable, the subcategory within a treatability group.

3.1.1 Spent Solvent and Dioxin Wastes **[40 CFR 261.31, 270.14(a), 264.13(a)(1), 268.2(f)(1), 268.7, 268.30, 268.31]**

F001 to F005 spent solvent wastes that are restricted from land disposal are identified by the generator during the pre-acceptance process, and the information is confirmed by the ultimate TSDF. The initial shipment of these wastes is accompanied by the proper LDR notification form, which indicates treatment standards. Containers are marked with the initial date of storage, and may not be stored at the Ashland facility for more than one year.

Dioxin-containing wastes, identified by the U.S. EPA codes F020, F021,

F022, F023, F026, and F027 wastes in 40 CFR 261.31 are not accepted at this facility.

3.1.2 California List Wastes

[40 CFR 270.14(a), 264.13(a)(1), 268.7, 268.32, 268.42(a); RCRA Section 3004(d)]

California List wastes, as defined in 40 CFR 268.32, are identified by the generator and confirmed by the ultimate TSDF. These wastes are accompanied by the proper LDR one-time notification form, with the initial shipment of the waste.

3.1.3 Listed Wastes

[40 CFR 270.14(a), 264.13(a)(1), 268.7, 268.33, 268.34, 268.35, 268.36, 268.41, 268.42, 268.43]

Listed wastes are identified by the generator and confirmed by the ultimate TSDF. The proper LDR one-time notification form accompanies the initial shipment of these wastes.

3.1.4 Characteristic Wastes

[40 CFR 270.14(a), 264.13(a)(1), 268.7, 268.9, 268.37, 268 - Appendix I, 268 - Appendix IX]

Characteristic wastes are identified by the generator and confirmed by the ultimate TSDF. The proper LDR one-time notification form accompanies the initial shipment of these wastes.

3.1.5 Radioactive Mixed Waste

[40 CFR 270.14(a), 264.13(a), 268.7, 268.35(c) and (d), 268.36(d), 268.42(d)]

Radioactive or nuclear wastes are not accepted at this facility.

3.1.6 Leachates

[40 CFR 270.14(a), 260.10, 264.13(a), 268.35(a)]

Not applicable to this facility.

3.1.7 Lab Packs

[40 CFR 270.14(a), 264.13(a), 268.7(a)(7) and (a)(8), 268.42(c), 268 -

rev.4
05/07

Appendix IV]

No treatment or disposal of Lab Packs takes place at this Ashland facility. Any Lab Packs accepted by Ashland for storage must be accompanied by an inventory sheet that lists each container, size of container, and identification of the contents of each container. The initial shipment must be accompanied by the proper LDR one-time notification form.

3.1.8 Contaminated Debris

[40 CFR 270.13(n), 268.2(g), 268.7, 268.9, 268.36, 268.45]

Hazardous debris accepted by this facility for storage will be containerized and will be stored as hazardous waste under the requirements of the RCRA Part B storage permit. The proper LDR one-time notification form accompanies the initial shipment of these wastes.

3.1.9 Waste Mixtures and Wastes with Overlapping Requirements

[40 CFR 270.14(a), 264.13(a)(1), 268.7, 268.9, 268.41, 268.43, 268.45(a)]

Waste mixtures and wastes carrying multiple waste codes must be characterized and compositions identified by the generator on a WPS before the material will be accepted for storage by this facility. The proper LDR one-time notification form accompanies the initial shipment of these wastes.

3.1.10 Dilution and Aggregation of Wastes

[40 CFR 270.14(a), 268.3]

This facility does not dilute or aggregate hazardous wastes.

3.2 Notification, Certification, and Recordkeeping Requirements

[40 CFR 270.14(a), 264.13, 264.73, 268.7, 268.9(d)]

Applicable LDR one-time written notifications from generators must accompany each initial hazardous waste shipment to this storage facility. Applicable certifications from generators must accompany affected hazardous waste shipments to this facility. Ashland personnel will review the proper documentation prior to accepting the waste for storage.

3.2.1 Retention of Generator Notices and Certifications
[40 CFR 270.14(a), 264.13, 268.7(a)]

With the initial shipment of hazardous wastes, LDR notices and certifications, as indicated in Section 3(b) must be submitted by the original generator of the waste. LDR notices and certifications will be reviewed by Ashland and the notices and certifications will be retained in the facility Operating Record.

3.2.2 Notification and Certification Requirements for Treatment Facilities
[40 CFR 270.14(a), 264.13, 268.7(b)]

This facility is not a treatment facility.

3.2.3 Notification and Certification Requirements for Land Disposal Facilities
[40 CFR 270.14(a), 264.13, 268.7(c)(1)]

This facility is not a land disposal facility.

3.2.4 Wastes Shipped to Subtitle C Facilities
[40 CFR 270.14(a), 264.13, 268.7(a) and (b)(5)]

All restricted waste accepted at this facility for storage will be shipped off-site to a Subtitle C hazardous waste TSDF. When such waste is shipped initially, Ashland will submit notifications and certifications in compliance with the notice and certification requirements applicable to generators under 40 CFR 268.7(a). Each initial shipment of waste that is transported off-site to a RCRA permitted Subtitle C TSDF will include a written notification and certification that the waste either meets or does not meet applicable standards or prohibition levels.

3.2.5 Wastes Shipped to Subtitle D Facilities
[40 CFR 270.14(a), 264.13, 268.7(d), 268.9(d)]

No waste is treated at this facility to remove hazardous characteristics.

3.2.6 Recyclable Materials
[40 CFR 270.14(a), 264.13, 268.7(b)(6)]

No wastes are used at this facility in a manner constituting disposal.

3.2.7 Recordkeeping

[40 CFR 270.14(a), 264.13, 264.73; 268.7(a)(5), (a)(6), and (a)(7); 268.7(d)]

Waste that is received at the facility from off-site must be accompanied by the proper notifications and certifications by the generator. This documentation will be reviewed by Ashland and will be maintained as part of the facility's Operating Record until closure of the facility, in accordance with the recordkeeping requirements of 40 CFR 264.73.

3.3 Requirements Pertaining to the Storage of Restricted Wastes **[40 CFR 270.14(a), 264.73, 268.50]**

Hazardous wastes that are restricted from land disposal will be stored in containers in the permitted hazardous waste CSU. Storage of restricted wastes will be for the sole purpose of accumulating sufficient quantities for efficient and economic shipment to permitted TSDFs. Restricted wastes will not be stored for longer than one year.

3.3.1 Restricted Wastes Stored in Containers **[40 CFR 270.14(a), 268.50(a)(2)(i)]**

Containers of restricted wastes will be clearly marked to identify the contents, and to note the date on which accumulation begins.

3.3.2 Restricted Wastes Stored in Tanks **[40 CFR 270.14a, 264.73, 268.50(a)(2)(ii)]**

No wastes are stored in tanks at this facility.

3.3.3 Storage of Liquid PCB Wastes **[40 CFR 270.14(a), 264.73; 268.50(f)]**

No liquid PCB or PCB-containing wastes will be stored at this facility. PCB ballasts may be stored on a 10 day basis.

3.4 Exemptions, Extensions, and Variances to Land Disposal Restrictions **[40 CFR 268.4, 268.5, 268.6, 268.13(b)(6) and (7), 268.14, 268.44, 270.14(b)(21)]**

No exemptions, extensions, or variances to land disposal restrictions are requested for this facility.

APPENDIX A

WASTE COMPATIBILITY GUIDANCE

EXAMPLES OF POTENTIALLY INCOMPATIBLE WASTE

Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects which are harmful to human health and the environment, such as (1) heat or pressure, (2) fire or explosion, (3) violent reaction, (4) toxic dusts, mists, fumes, or gases, or (5) flammable fumes or gases.

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which result from mixing materials in one group with materials in another group. The list is intended as a guide to owners or operators of treatment, storage, and disposal facilities, and to enforcement and permit granting officials, to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

This list is not intended to be exhaustive. An owner or operator must, as the regulations require, adequately analyze his wastes so that he can avoid creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not.

It is possible for potentially incompatible wastes to be mixed in a way that precludes a reaction (e.g., adding acid to water rather than water to acid) or that neutralizes them (e.g., a strong acid mixed with a strong base), or that controls substances produced (e.g., by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator).

In the lists which follow, the mixing of a Group A material with a Group B material may have the potential consequences as noted.

GROUP 1-A

Acetylene sludge
Alkaline caustic liquids
Alkaline cleaner
Alkaline corrosive liquids
Alkaline corrosive battery fluid
Caustic waste water
Lime sludge and other corrosive alkalies
Lime waste water
Lime and water
Spent caustic

GROUP 1-B

Acid sludge
Acid and water
Battery acid
Chemical cleaners
Electrolyte, acid
Etching acid liquid or solvent
Pickling liquor and other corrosive acids
Spent acid
Spent mixed acid
Spent sulfuric acid

Potential consequences: heat generation; violent reaction.

GROUP 2-A

Aluminum
Beryllium
Calcium
Lithium
Magnesium
Potassium
Sodium
Zinc powder
Other reactive metals and metal hydrides

GROUP 2-B

Any waste in Group 1-A or 1-B

Potential consequences: fire or explosion; generation of flammable hydrogen gas.

GROUP 3-A

Alcohols

Water

GROUP 3-B

Any concentrated waste in Groups 1-A or 1-B

Calcium

Lithium

Metal hydrides

Potassium

SO₂Cl₂, SOCl₂, PCl₃, CH₃SiCl₃

Other water-reactive waste

Potential consequences: fire, explosion, or heat generation; generation of flammable or toxic gases.

GROUP 4-A

Alcohols

Aldehydes

Halogenated hydrocarbons

Nitrated hydrocarbons

Unsaturated hydrocarbons

Other reactive organic compounds and solvents

GROUP 4-B

Concentrated Group 1-A or 1-B wastes

Group 2-A wastes

Potential consequences: fire, explosion, or violent reaction

GROUP 5-A

Spent cyanide and sulfide solutions

GROUP 5-B

Group 1-B wastes

Potential consequences: generation of toxic hydrogen cyanide or hydrogen sulfide gas.

GROUP 6-A

Chlorates
Chlorine
Chlorites
Chromic acid
Hypochlorites
Nitrates
Nitric acid, fuming
Perchlorates
Permanganates
Peroxides
Other strong oxidizers

GROUP 6-B

Acetic acid and other organic acids
Concentrated mineral acids
Group 2-A wastes
Group 4-A wastes
Other flammable and combustible wastes

Potential consequences: fire, explosion, or violent reaction.

Source: "Law, Regulations, and Guidelines for Handling of Hazardous Waste." California Department of Health, February 1975. [46 FR 2872, Jan. 12, 1981]

In addition to the above guidelines, Table A-1 may be used to determine which waste types may be stored together within the same storage bay or cell. The waste types have been designated within the following broad ranges: non-chlorinated solvents, chlorinated solvents, acid corrosives, base corrosives, cyanide/metal bearing wastes and insecticides/pesticides. To use the table, select the waste stream type which is to be placed in storage along the left side of the table. By reading across, the waste streams with which the newly received waste can be stored are indicated with "yes". The new waste stream cannot be stored in the same bay or cell which contains a waste type that is indicated by a "no" in the table.

Table A-1
Waste Type Compatibility for Storage

	Non-Chlor Solvents	Chlor Solv	Acid Corr	Base Corr	Plating/Metal	TCLP Organics
Non-Chlor Solvents	Yes	Yes	No	No	Yes	Yes
Chlor Solvents	Yes	Yes	No	No	No	Yes
Acid Corr	No	No	Yes	No	No	No
Base Corr	No	No	No	Yes	No	No
Plating/Metal	Yes	No	No	No	Yes	No
TCLP Organics	Yes	Yes	No	No	No	Yes

For purposes of characterizing waste types, the waste types generally consist of wastes carrying one or more of the following hazardous waste codes (Table A-2).

Table A-2
Waste Codes

Non-chlorinated Solvents (and other non-chlorinated organic chemicals)	D001, D018, D023, D024, D025, D026, D030, D035, D036, D038, F003, F004, F005, F034, F035, F037, F038
Chlorinated Solvents (and other Chlorinated Organic Chemicals)	D001, D019, D020, D021, D022, D023, D027, D028, D029, D031, D032, D033, D034, D037, D039, D040, D041, D042, D043, F001, F002, K001
Acid Corrosives	D002, D004, D005, D006, D007, D008, D009, D010, D011, F006
Base Corrosives	D002, D004, D005, D006, D007, D008, D009, D010, D011, F006
Plating and Other Metal Bearing Wastes	D004, D005, D006, D007, D008, D009, D010, D011, F006, F007, F008, F009, F019, P029, K086
Other TCLP Organics (Pesticides)	D012, D013, D014, D015, D016, D017

APPENDIX B
WASTE PROFILE SHEET (WPS)

APPENDIX C

RCRA OPERATING LOG

TABLES

TABLE 1
RCRA HAZARDOUS WASTE STORAGE

Ashland Distribution
Clearfield, Utah

The Ashland Clearfield facility accepts containerized hazardous wastes that are collected at the customer's location and are qualified for acceptance by a permitted treatment, storage, disposal, or reclamation facility.

The following wastes may be stored:

<u>D Codes</u> D001-D043 (except D003)	<u>P Codes</u> P029
<u>F Codes</u> F001–F009, F019, F034, F035, F037, F038	<u>U Codes</u> U001-U004, U008, U012, U019, U023, U028, U031, U032, U039, U043, U044, U051-U053, U055-U057, U069-U072, U075-U079, U080, U083, U088, U090, U092, U103, U107, U108, U110, U112, U117, U121, U122, U123, U125, U140, U147, U154, U159, U161, U165, U171, U188, U190, U194, U196, U210, U213, U219, U220, U223, U226, U228, U239, U359
<u>K Codes</u> K001, K048-K052, K086	

TABLE 2
ASHLAND DISTRIBUTION PRE-ACCEPTANCE CRITERIA

The Ashland Clearfield facility is permitted to store only those off-site generated hazardous wastes which carry the hazardous waste codes listed in Table 1. Prior to accepting a waste stream for storage, Ashland must establish that the waste stream meets certain criteria such that it can be appropriately characterized and safely and properly stored with compatible wastes. Ashland must also confirm that no wastes are accepted for storage, which consist of the hazardous waste codes that Ashland is not permitted to store. However, these wastes may be held on-site for up to 10 days.

To make this determination, the following list is provided. This list contains each of the permitted hazardous waste codes, the qualifying criteria which the waste must meet to carry that code and the analytical test method or other means of establishing whether that criteria is met. Some wastes may carry more than one hazardous waste code if more than one criteria are met.

During the qualification process for a waste stream, the following list must be reviewed with the WPS provided by the generator and the analytical data provided by the generator, TSD or reclamation facility or other source. The analytical data must provide all information required in accordance with the facility's WAP. The proper hazardous waste codes which apply to the waste stream will be determined during this review.

Waste Code	Qualifying Criteria	Test Method
D001	Flash point of < 140°F	Flash Point
D002	pH of < 2.5 or > 12 SU	pH
D004	Arsenic \geq 5.0 mg/l in TCLP extract	TCLP ¹
D005	Barium \geq 100.0 mg/l in TCLP extract	TCLP ¹
D006	Cadmium \geq 1.0 mg/l in TCLP extract	TCLP ¹
D007	Chromium \geq 5.0 mg/l in TCLP extract	TCLP ¹
D008	Lead \geq 5.0 mg/l in TCLP extract	TCLP ¹
D009	Mercury \geq 0.2 mg/l in TCLP extract	TCLP ¹
D010	Selenium \geq 1.0 mg/l in TCLP extract	TCLP ¹
D011	Silver \geq 5.0 mg/l in TCLP extract	TCLP ¹
D012	Endrin \geq 0.02 mg/l in TCLP extract	TCLP ¹
D013	Lindane \geq 0.4 mg/l in TCLP extract	TCLP ¹
D014	Methoxychlor \geq 10.0 mg/l in TCLP extract	TCLP ¹
D015	Toxaphene \geq 0.5 mg/l in TCLP extract	TCLP ¹
D016	2,4-D \geq 10.0 mg/l in TCLP extract	TCLP ¹
D017	2,4,5-TP Silvex \geq 1.0 mg/l in TCLP extract	TCLP ¹
D018	Benzene \geq 0.5 mg/l in TCLP extract	TCLP ¹
D019	Carbon tetrachloride \geq 0.5 mg/l in TCLP extract	TCLP ¹
D020	Chlordane \geq 0.03 mg/l in TCLP extract	TCLP ¹
D021	Chlorobenzene \geq 100.0 mg/l in TCLP extract	TCLP ¹
D022	Chloroform \geq 6.0 mg/l in TCLP extract	TCLP ¹
D023	o-Cresol \geq 200.0 mg/l in TCLP extract ²	TCLP ¹
Waste Code	Qualifying Criteria	Test Method

D024	m-Cresol ≥ 200.0 mg/l in TCLP extract ²	TCLP ¹
D025	p-Cresol ≥ 200.0 mg/l in TCLP extract ²	TCLP ¹
D026	Cresol ≥ 200.0 mg/l in TCLP extract ²	TCLP ¹
D027	1,4-Dichlorobenzene ≥ 7.5 mg/l in TCLP extract	TCLP ¹
D028	1,2-Dichloroethane ≥ 0.5 mg/l in TCLP extract	TCLP ¹
D029	1,1-Dichloroethylene ≥ 0.7 mg/l in TCLP extract	TCLP ¹
D030	2,4-Dinitrotoluene ≥ 0.13 mg/l in TCLP extract ³	TCLP ¹
D031	Heptachlor (and its epoxide) ≥ 0.008 mg/l in TCLP extract	TCLP ¹
D032	Hexachlorobenzene ≥ 0.13 mg/l in TCLP extract ³	TCLP ¹
D033	Hexachlorobutadiene ≥ 0.5 mg/l in TCLP extract	TCLP ¹
D034	Hexachloroethane ≥ 3.0 mg/l in TCLP extract	TCLP ¹
D035	Nitrobenzene ≥ 2.0 mg/l in TCLP extract	TCLP ¹
D036	Pentachlorophenol ≥ 100.0 mg/l in TCLP extract	TCLP ¹
D037	Pyridine ≥ 5.0 mg/l in TCLP extract ³	TCLP ¹
D038	Tetrachloroethylene ≥ 0.7 mg/l In TCLP extract	TCLP ¹
D039	Tetrachloroethylene ≥ 0.7 mg/l in TCLP extract	TCLP ¹
D040	Trichloroethylene ≥ 0.5 mg/l in TCLP extract	TCLP ¹
D041	2,4,5-Trichlorophenol ≥ 400.0 mg/l in TCLP extract	TCLP ¹
D042	2,4,6-Trichlorophenol ≥ 2.0 mg/l in TCLP extract	TCLP ¹
D043	Vinyl chloride ≥ 0.2 mg/l in TCLP extract	TCLP ¹
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	Process knowledge/solvent scan
F002	The following spent halogenated solvents: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	Process knowledge/solvent scan

Waste Code	Qualifying Criteria	Test Method
F003	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	Process knowledge/solvent scan
F004	The following spent non-halogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	Process knowledge/solvent scan
F005	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	Process knowledge/solvent scan
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum	Process knowledge
F007	Spent cyanide plating bath solutions from electroplating operations	Process knowledge/cyanide scan
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process	Process knowledge/cyanide scan
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process	Process knowledge/cyanide scan

Waste Code	Qualifying Criteria	Test Method
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process	Process knowledge
F034	Wastewaters (except those that have not come into contact with process contaminants) process residuals, preservative drippage, and spent formulations, from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	Process knowledge
F035	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	Process knowledge
F037	Petroleum refinery primary oil/water/solids separation sludge - Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in 261.31(b)(2)(including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing.	Process knowledge

Waste Code	Qualifying Criteria	Test Method
F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge – Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in 40 CFR 261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing.	Process knowledge
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol	Process knowledge
K048	Dissolved air flotation (DAF) float from the petroleum refining industry	Process knowledge
K049	Slop oil emulsion solids from the petroleum refining industry	Process knowledge
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry	Process knowledge
K051	API separator sludge from the petroleum refining industry	Process knowledge
K052	Tank bottoms (lead) from the petroleum industry	Process knowledge
K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead. Chromium ≥ 50 mg/l in TCLP Extract; Lead ≥ 5.0 mg/l in TCLP Extract.	Process knowledge/TCLP
P029	Copper Cyanide	Cyanide scan
U Codes	Commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products.	Spec Sheet or MSDS

TABLE 3
WASTE ANALYSIS TEST METHODS

Parameter	Rationale	Test Method ¹
Physical Description	Conformance with WPS ²	None
Viscosity	Handling Considerations	Several
Specific Gravity	Handling Considerations	ASTM D-891-59
pH	Confirm RCRA Hazardous Waste Code Confirm Treatment Method	9040B
Flash Point	Confirm RCRA Hazardous Waste Code	1010
Cyanide	Confirm Non-Reactivity Confirm Treatment Method	9010
Sulfide	Same as for Cyanide	9030B
TCLP Analyses for RCRA Metals	Confirm RCRA Hazardous Waste Code Confirm Treatment Method	1311 and either 6010B or 7060A As 7081 Ba 7131A Cd 7191 Cr 7421 Pb 7470A Hg 7740 Se 7761 Ag
TCLP Analyses for VOCs	Confirm RCRA Hazardous Waste Code Confirm Treatment Method	1311 8260B
TCLP Analyses for SVOCs	Confirm RCRA Hazardous Waste Code Confirm Treatment Method	1311 8270C
Solvent Scan	Determine Acceptability for Reclamation of Fuels Program	8011 8015B 8021B 8260B

¹ All methods reference U.S. Environmental Protection Agency Publication, *SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, latest edition, unless otherwise noted.

² Applies to all test parameters listed.